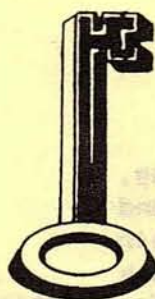
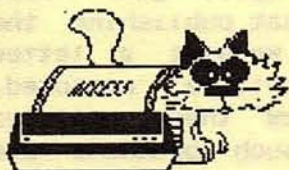


Atari  
Computer  
Club  
Encompassing  
Suburban  
Sacramento



# THE ACCESS KEY

VOLUME 7 NUMBER 9 SEPTEMBER 1987



## From the Editor's Desk

### EDITOR RESIGNS! MUST FILL VACANCY!

That got your attention, didn't it? Actually, it's not that dramatic. I did inform the Board that I was resigning - effective after the December issue; so they should start looking for a replacement, now, and not wait for the last minute. Now I'm telling you!

The reason is not very dramatic either; it is simply that the job has gotten stale. December will make two full years as Editor, and I think that is enough. I've done what I wanted to do with the newsletter and it is time for a new person with some new ideas to take over. Me, I've got some other projects I want to devote my time to. So, think seriously about it, eh?

You probably want to know what the job entails; that's only fair. I've assembled a pretty good (and verbose) staff of contributors who will keep you well supplied with articles, so you won't have to write any more than you want to. Your main job will be to massage the articles into shape and fit them in.

As for equipment, you will need a word processor (or equivalent) and a printer. Not essential, but very helpful, is a modem to collect the articles in electronic form.

The actual assembly of the newsletter is standard cut-and-paste onto bristol board. The more of the layout you

### GENERAL MEETING

23 SEPTEMBER  
SMUD BUILDING  
6201 S STREET  
7:30 P.M.

### \*\*\*\*\* THE AGENDA \*\*\*\*\*

\*  
\* GUEST SPEAKER: \*  
\*  
\* Neil Harris \*  
\* Director of Marketing \*  
\* and Communications \*  
\* Atari Corp. \*  
\*  
\* RAFFLE: \*  
\*  
\* "Your choice from the \*  
\* Raffle Table" \*  
\*  
\*\*\*\*\*

can do with your computer, the less cutting there is. The rule here is, what you put on the board is what the printer gives you.

The rest is almost anticlimax; take it to the printer, pick it up, and deliver it to the APE\*SIG where it is prepared for mailing by the ACCESS Elves.

Oh yes, there are a couple of meetings each month which you also attend; the Editor is a Club officer, after all.

Now don't wait for the next guy to volunteer; he might not do it, and, come January, there won't be a newsletter. If you want to learn desktop publishing by doing it, contact me or another officer. After the December issue I'm outta here!



## President's Corner

by Dave Schwartz

Well, Fall is fast approaching, school has returned for many people and our activities begin to look once again to the indoors, many of us will get back to the business of Atari computing. Now is also the time that we should see an increase in new products beginning to appear in greater numbers at our local stores as both manufacturers of products and the retailers begin to look to the upcoming Christmas shopping season.

Congratulations go to both Dale Mauch and John Laster who both were recently elected to the positions of Vice-President and Membership Chairman, respectively. Both of these gentlemen are fine members and I know will be a great asset to the Club in their new positions. We are now also in need of an 8-bit Librarian, as this position was vacated by the resignation of Rod Trebino. If you are interested in running for this office, please let me know as soon as possible so we may quickly fill this important position.

Many of you may have heard the recent news of Atari offering to buy the Federated Group (67 stores). Atari is hoping to use these stores as a way to market their entire computer line including the long awaited Mega STs and laser printer. This would certainly give the Atari computers a broader exposure to the consumer. Although the ST is currently being sold through Federated, there has not been much software support, nor knowledgeable sales people available there and hopefully this acquisition will improve both of these areas.

I am sure many of you are looking forward to the meeting on the 23rd of this month, as our very special guest speaker will be Neil Harris, Director of Marketing Communications, at Atari Corp. This will be your chance to ask questions and hear updated information as to the happenings with our best loved computers. I hope you will all be able to attend this exciting meeting.

## ACCESS VS PIRATING

by A. C. Di Napoli  
Club Secretary

A couple of months ago you read an article in our newsletter that criticized Antic Magazine for carrying a Duplicating Technologies, Inc. advertisement for the Duplicator 1850, a product which clearly encouraged copying and distributing protected software. Well, your Club officers didn't feel that publishing the article was enough, so we sent a letter to Antic with the article enclosed, asking them to review their policies regarding advertising such products and requesting them to discontinue carrying the ad from DTI. So far, we've heard nothing back, but the ad has been discontinued.

In another action, we had become aware that a local Atari BBS was carrying pirated software as a matter of policy. The system operator ignored repeated personal suggestions over a long period of time to discontinue the practice and limit his offerings to public domain programs only. We felt that his actions are adversely affecting both the Atari community as a whole and all other BBS operators who try their best to remain within the bounds of the law. After considerable discussion on the subject, we decided to send a letter to the Software Publishers Association advising them of this BBS and its practice. The letter was sent on August 1st. No feedback yet, but we hope they look into it.

As you have most likely deduced by now, your officers are clearly against pirating. We have not been satisfied to throw up our arms and exclaim, "Pirating is all around us, but what can we do about it?" We have taken the initiative, and we earnestly hope that other user groups follow our lead. We also encourage your support; should you find similar ads or BBS operators, let us know. We'll do whatever we can to put a stop to it!





## CLUB NOTES

By Kim Beattie

A.C.C.E.S.S.

### THINGS TO COME

In October we will have a demo of the IBM emulator for the ST, PC DITTO. Come and see the ST run IBM software!

Does anyone in ACCESS (or, failing that, the Sacramento area) have the MAGIC-SAC Macintosh emulator for the ST? Would you like to demo it at a club meeting? (Please!) If your answers to the above questions are "Yes", please contact me at any meeting. You can also leave a message for me on any of the following BBSs: ACCESS, SELECT, DREAM PARK, or THE CITY OF GREY. Thanks!

### FUND RAISING

The paper drive got off to a good start at the August meeting. Considering that it was announced for the first time in the August issue of the newsletter, the response was quite good. Save your newspapers and bring them to the general meeting. We will have someone there to take them from you; and thanks for supporting ACCESS! Currently, we are only accepting newspapers, magazines, and computer paper (used or not). This is an easy way for the Club to make some money and it really requires little effort on your part. You're going to toss those newspapers anyway, so why not give them to the Club?

There has already been some interest in the coupon book that we will be making available to members starting (we hope) in October. ENTERTAINMENT '88 is full of all kinds of money saving coupons that can be used anytime during 1988. These coupons are not just for local merchants, but include San Francisco restaurants, Skiing coupons and lots of other neat things. Take a look at the "demo" book at the next meeting. Remember for every book that is bought, ACCESS will receive \$6. Just another "passive" way to raise funds for the Club.

### RAFFLE NEWS

As reported last month, the raffle is doing very well. Apparently you like having a choice! There is quite a selection of items to choose from if you are the lucky winner, but remember, in order to win you have to buy a ticket first!

8-Bit prizes include: LETTER PERFECT, DATA PERFECT, VISICALC, GRAPHIC GENERATOR, WIZARD'S CROWN, KARATEKA, MEGAFONT, TELETARI, and RUBBER STAMP.

For the ST: ZOOMRACKS II, STARGLIDER, PHANTASIE I, LEATHER GODDESSES OF PHOBOS, TIME BANDIT, KING'S QUEST II, THE BLACK CAULDRON, ST STAR RAIDERS, BALANCE OF POWER, and a MOUSE PAD.

For either machine, there is an ATARI "SPACE AGE" JOYSTICK.

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## ST SIG Report

by Dave Schwartz

The August meeting was held on Monday, August 10th. The meeting was primarily spent discussing financial programs for the ST. Member Frank Frymire demonstrated SWIFTCALC by Timeworks and I demonstrated DOLLARS and SENSE by Monogram.

Last month I reported I had received copies of a new BASIC for the ST called "DBASIC", written by DTACK Grounded Inc. They only sent few manuals to each group plus one original program disk and 63 labels. We can make as many copies of the program as we wish, however, only the few manuals we received may be given out, all other manuals will need to be purchased from DTACK. DTACK says it is the Fastest BASIC available for the ST, however, a major drawback to this program is its lack of support for GEM (ALERT boxes and all, like GFA).

(Continued on next page.)



## (ST SIG, Cont.)

At the last ST\*SIG meeting many of you expressed an interest in receiving a copy of DBASIC. At that time we did not have a plan on how to fairly distribute the product, especially the manuals, and I hope to have something to report to you at the September ST\*SIG meeting.

The scheduling of the PC-DITTO program demonstration for the September ST\*SIG meeting has been moved to the October ACCESS general meeting. This product will be of interest to all members as many use IBM PC software in their offices and would enjoy seeing this IBM emulator package. If you own PC-Ditto and/or the I.B. DRIVE (5 1/4" floppy drive for the ST) and would like to help out that evening with the demonstration, please let me know.

Also, it was approved by the Officers at last month's Officer's meeting to purchase a 520 ST (computer only) from member Bob Clark who has a 2nd computer he wishes to sell. This would be the beginning stages of the Club to finally own an ST. Disk drive(s) and monitor will be purchased in the future. We will now only need volunteers to bring just the disk drive(s). I will let you know when this becomes finalized.

The ST\*SIG meeting this month is an "Open" format. We will be discussing the ST\*SIG and look back at our 1st year and make some important decisions as to the future of our SIG. I would appreciate each of you coming to this important meeting as decisions made at this meeting will effect all of you and your input is needed.

We also need volunteers each ST\*SIG meeting and the monthly ACCESS meeting, to bring ST equipment. Please let me know if you can help out.

The ST\*SIG meetings begin at 7:30 p.m. on the 2nd Monday of each month at SIERRA HI-TECH at 10561 Old Placerville Rd., near Mather Air Force Base at 7:30p.m. Directions: Take Highway 50 to Mather Field Rd turnoff going South (towards the Air Force Base), Take a right turn at the first stop sign (Rockingham). Go about 2 blocks on Rockingham to Old Placerville Rd. and make a right turn. It will be the second building on the left.

## GOLDRUNNER

Reviewed by David M. Schwartz

The first thing that struck me as I began to play GOLDRUNNER was the smoothness of the scrolling screen. It moves so fast it is hard to imagine I am playing this game on a home computer and not on an arcade machine. The graphics are outstanding, some of the best I have seen on any computer, besides those of Time Bandits and Microdeal's other new game, AIRBALL.

You are The GOLDRUNNER, an ex-space pirate who carries the desperate hopes of a ravaged Earth. Your mission is to destroy the Ringworlds of Triton. These are artificial worlds, of unknown composition and built by unconceivable technology. Control of your ship can be accomplished with either the joystick or keyboard. I found that using the joystick to be the best to control your ship.

As you move around, a vertically scrolling screen moves below your ship. You must maneuver your ship around the taller buildings which are only distinguished from the other lower buildings by the length of their shadows. These taller buildings cannot be destroyed and creep up on you suddenly as you fly around the Ring when you least expect them. You eventually memorize the layout of the Ring making it easier to avoid them. In addition, there are a hostile race protecting the Ring from destruction and will chase after you and shoot a bomb like weapon that floats towards you and you must out run them.

After you complete each Ring you are to find the exit building to leave and go on to the next Ring (level). There is a bonus round that reminds me of the bonus round in the arcade game GALAGA.

This game is very addicting and fun to play. It does offer a two-player mode where you can share one joystick and it also permits you to save your high scores. I would highly recommend this game.

MICRODEAL U.S.A.  
576 S. Telegraph  
Pontiac, Michigan 48053  
(313)334-8729  
\$39.95



## DESKCART REVISITED

### Hints, Tips, and Notes

by Kim "I love my DeskCart!" Beattie

DeskCart is a great product, but it's not perfect. The biggest problems I've run into so far are the Control Panel not operating properly and the UT-52 emulator occasionally fritzing out. Here's some little tricks I've learned to use with Deskcart.

The control panel doesn't really work like it should. Not fatal bugs or problems, but it often doesn't recover your settings without re-loading the Deskcart.inf file. My solution is to continue using ROCP.ACC. I set the options I want (using the original Control Panel) and then save the desktop. Now ROCP remembers all of my settings regardless of what happens to the desktop. This, to me, is the biggest problem with the current version of DESKCART. (Not all that bad considering...)

Occasionally, if you try to use the UT-52 terminal you'll find that what you type in is not what appears on the screen! Consequently, the modem does not receive the AT commands it expects. Two solutions to this problem. First, reboot. A little extreme but it works. Second, and much more practical, reset the UT-52 parameters (push the HELP key) and that will take care of the problem too. The circumstances under which the UT-52 terminal goes crazy seems to be after "showing" a file to the screen or after running a TOS or TTP file. I don't know why this is, but re-setting the parameters will clear the problem up.

Kind of a weird thing happens when using the TIMEWORKS programs (SwiftCalc, Word Writer, and Data Manager ST). For some reason, when the print spooler is on, the last line of your file (or spreadsheet, etc) will not print and the page doesn't advance. Either click on the "Page Feed" button of the print spooler (this causes the last line to print and the page to advance), or simply turn the spooler off to take care of this little idiosyncrasy.

The page advance feature of the print spooler is a great little feature. Sure beats going over to the printer, taking it off line, pressing page feed, and then placing it back on line. Clicking on the page advance button of the Deskcart spooler is much easier, and the page advance button will work regardless of the on/off state of the print spooler.

For some reason, the ARC and DE-ARC features of DCOPY will not work with DESKCART Ramdisk. The programs ARCX.TTP or ARC.TTP work with just fine with the DESKCART ramdisk, so there's no real problem here, but it is weird.

Ever switch disks and then call for one of the DESKCART data files? What happens is that the program will ask you to insert the proper disk, but often, after clicking on "Okay" DESKCART will continue to tell you to insert the proper disk. The solution is to use the DISK UTILITIES option to take a STATUS of the new disk. This will read the new disk and then you can access your data files. (Of course you can also simply press "ESCAPE" to read a new disk if you're on the desktop and not in the middle of a program.)

If you are using a "screen saver" with your ST you may find that it doesn't work with Deskcart installed. The reason for this is the clock that Deskcart displays is constantly being updated and the "screen saver" sees this as user input, so it never reaches the "trigger" point. In order for your screen saver to work you have to turn off the clock display. This is done from the Deskcart Control Panel. So if you plan to leave the monitor on while your away, turn off the clock display and your screen saver will work just like it's supposed to.

I've had DESKCART plugged into my computer now for over two months and I still think it's the greatest thing to come along since disk drives! The few little "bugs" that do exist (see above) are minor and hardly worth mentioning. Future updates of the product will hopefully clear up these up, but I'm in no hurry. As is, DESKCART works, and it works well. I still recommend this product without reservation.



# Atari Bits & Pieces

by Kim Beattie

According to "non-official" messages posted on GENIE by TIMWORKS employees, TIMWORKS will eventually be doing a revision of SWIFTCALC ST. The new version will be a "from the ground up" redesign. Good news for SWIFTCALC ST owners!

HARTECH LTD. has licensed the ATARI name and logo for their line of calculators. The company manufactures calculators ranging from a solar powered, credit card size calculator up through desktop calculators including one which can store names and phone numbers in memory. The new line of "Atari Brand" calculators should be in the stores this summer.

The MAGIC-SAC continues to grow in power and support. The latest version of the SAC (4.5?) adds hard drive support. Also coming "soon" from Data Pacific, the makers of the MAGIC-SAC is the "Translator" disk drive interface. Containing a small computer of it's own, the Z80, the TRANSLATOR will allow MAGIC-SAC ST to run Macintosh software right out of the box! Expected retail price: \$199

XLENT Software is now shipping the upgrade for the FIRST XLENT WORD PROCESSOR Version 2.1 includes the ability to save system configuration and the ability to search and replace the "RETURN" character. To get your upgrade, send the yellow 'upgrade' card that came with the manual. If you've lost the upgrade card, send the master disk and \$3, or \$5 and the serial number of the master disk to XLENT software. (If you have the program, you have the address too, so I won't repeat that here...)

Hmmm, another 8-bit emulator for the ST? STEVE JONES of Mechanicsburg, PA has developed a cartridge based Atari 8-bit emulator for the ST. Like the MAGIC-SAC it requires the OS ROMS of the emulated computer. Using the same idea, work is also progressing on versions that will emulate the APPLE II and COMMODORE 64 computers. The cartridge based 8-bit emulator is not finished yet, but it has been demonstrated before a couple of

Atari user groups around the country. The Jones emulator is said to be faster than the other 8-bit emulator written by Darek Mihocka and due to be published in the Sept. or Oct. ST-LOG.

According to Neil Harris, the ATARI PC failed its initial FCC test. More RF shielding must be added and the machine resubmitted for FCC approval. Needless to say, this has pushed the release date back. Also, only the version of the PC bundled with the new monochrome monitor will offer EGA video output (as opposed to earlier announcements that the ATARI PC would support Mono, CGA and EGA video...)

The latest set of release dates for ATARI VAPORWARE are the end of August for the MEGA II & IV, September 10 for the new 8-bit DS/DD disk drive and 1200 BPS modem, and the LASER printer on September 15th. What? No mention there of the 8-bit 80-column card.

On the other hand, owners of the ICD MIO device may be happy to know that ICD is finally starting to offer their version of a 80-column card for the 8-bit. The price is \$99.95 and you must own a MIO to use the ICD 80-column device.

Owners of PUBLISHING PARTNER, would you like to be able to import WORD WRITER or FIRST WORD files into PP and still retain ALL the attributes of text like boldface, italics, etc.? Well, MATRATT (Matthew Ratcliff) in the latest issue of A.U.G.O.G.H. journal has said that he will be writing just such a program for SOTLOGIK. A STWRITER version will soon follow.

My sources tell me that Electronic Arts will be releasing MARBLE MADNESS and THE BARD'S TALE in mid September. GFA COMPANION should have shipped at the end of August. Is it in the stores yet? MINDSCAPE will be releasing GAUNTLET (you know, that real neat arcade game?) for the ST in the near future. It's already available in Europe and it's a dead ringer (minus the moans and groans) of the arcade version. Really impressive!

Summer is traditionally a slow time for new computer product releases. Compared to past summers, though, the summer of 1987 has been pretty good for Atari owners. A perusal of the store

(Continued on next page.)



## ATARI BITS, Cont.

shelves will see a number of new titles for both the 8-bit machine and the ST. The bulk of the new software is for the ST, but the 8-bit is seeing more new software recently than in recent months. All this is an indication that Atari is alive and doing well. The success of the ST is rubbing off on the 8-bit line. The new 8-bit software is all games, but that's better than no software at all, isn't it?

Okay, so what is new? Let's start with the XL/XE (including the 800, of course...). INFILTRATOR (Mindscape; 64K) puts you behind the controls of an attack helicopter. In ACE OF ACES (Accolade; 64K) you are the pilot of a fighter bomber over Europe during WWII. ACE OF ACES is not a simulator, but it is an interesting game. LURKING HORROR and STATION FALL (Infocom; 48K) are the two new text adventures from Infocom. LURKING HORROR is a horror/supernatural story of the Lovecraft genre. STATION FALL reunites with the star of PLANET FALL, Floyd the droid. Activision has released PITFALL and DEMON ATTACK on a single disk.

For the ST we have: Q-BALL (Mindscape), a 3-dimensional pool game. BATTLE ZONE (Atari), the arcade classic comes to the ST. AUTODUEL (Origins/EA), teaches you to drive offensively. AIRBALL (Microdeal/Michtron) is the hot new arcade game for the ST. GUILD OF THIEVES (Rainbird), the makers of THE PAWN do it again. In ALIANTS (Star Soft/TDC Dist.), it's up to you to defend and save the earth. Not an original idea, but the graphics are impressive. BARBARIAN (Psygnosis) is a graphic arcade/adventure. The graphics on this game are really impressive. You've got to see it to believe it! The game is hard too. This is not for those of you who are easily frustrated. Electronic Arts has released EMPIRE, a game of conquest.

PC DITTO is getting a lot of positive reviews. The list of IBM programs KNOWN to run under PC DITTO continues to grow. The basic rule of thumb is "if it runs on a PC-XT, PC DITTO can run it." Games and other entertainment types of software are about the only programs that don't do so well with PC DITTO. On the other hand, the

intent of PC DITTO was to run "serious" software and according to reports it does that very well. (Not to say that all games do poorly with PC DITTO, there are a number that do very well.) Come to the OCTOBER MEETING and see a demonstration of PC DITTO. Watch the ST run IBM software! (now if we can only get a MAGIC-SAC demo...)

MASTERPLAN is a Canadian product that looks for all the world like a VIP clone! Only this one costs less. For owners of EASY DRAW, three new resource packs are out. TECHNICAL DRAW ART-1, PERSONAL DRAW ART-1, and FONT PACK-1 which includes two new fonts for EASY DRAW. ST REPLAY, the exciting new sound digitizer from Microdeal is also now in Sacramento.

Now, what about those pieces of vaporware? What are we still waiting for? Here's a partial list: DUNGEON MASTER, RPV, MIDI MAZE, WORD PERFECT, ATARI MS WRITE, the 8-bit 80-column card, 1200 bps modem, Mega STs, and the laser printer. Now you can see why what we have seems like so little. We're all waiting for the "good" stuff. Despite all the new stuff, the things we go to the store hoping to see are still missing. That's disappointing and takes some of the joy out of the other new products.

I've always felt that BOULDERDASH is the best 8-bit game around. SUPER BOULDERDASH was one of the few programs (and the only game) that I regretted leaving behind when I left the 8-bit for the ST. Well, coming soon from EPYX is the BOULDERDASH CONSTRUCTION KIT for the ST! I've seen the game and I think it is hot! Just as good as the 8-bit version and a construction kit too. (I've heard that there might be an 8-bit version also) I hope EPYX releases this one soon!

Not bad for a "slow summer." And this is only the products that have made it to Sacramento. Looking through any Atari magazine will quickly show that there are many new products that haven't made it to Sacramento yet. Yes indeed, things are looking good for Atari. And what's good for Atari is good for Atari owners!



## FLASH DO FILES

by Kim Beattie

What is a DO file? It is a text file of commands that you create that gives a series of instructions to FLASH. With a DO file you can automate many of the repetitive functions that you go through each time you use FLASH. A DO file is a way of programming FLASH to perform a series of operations. The FLASH DO commands control all of the features of FLASH. Okay, enough talk. Here's an example:

The comments in parentheses,(), are for the purposes of this article and are NOT part of the DO file.

```
>II|      (Turn the "online"
           timer on.)
>WA RETURN| (Wait for the BBS to
            send the string
            "RETURN")
>PA 2|     (Pause two seconds...)
|         (Press RETURN...)
>WA RETURN| (Wait for "RETURN"
            again...)
|         (Press RETURN again..)
>WA (Y/N)| (Wait for the "Y/N"
            string,,)
Y         ("Y" for "Yes", I need
            linefeeds...)
>WA ACCESS BBS| (Wait for another
                string...)
^C        (Skip the opening
            title screen...)
>WA USER   (Wait again...)
MYPASSWORD| (Send my password...)
>WA -***-|  ("Wait" is an
            important and
            useful command...)
9999|      (Send the last four
            digits of my phone
            number.)
>AS M|     (Turn ASCII U/L
            metering "on.")
>XM S|     (Set XMODEM last
            sector padding to
            size byte.)
>DP G:|    (Set the default data
            path to drive G, my
            ramdisk.)
```

Look familiar? Yes, it's the log-on sequence to the ACCESS BBS. Once I tell FLASH to dial ACCESS, I sit back and let my ST do the driving until I'm logged on and the BBS is waiting for me.

A few notes: the ">" tells FLASH that what follows is a command and is not to be sent to the modem (and on to the BBS). Each command line must start with this symbol. The lines that don't are sent the BBS and in this DO file are the responses to the log-on questions.

The "|" symbol is the RETURN key. Each command line must end with this so FLASH knows to go on to the next command. Leave this out and FLASH will wait around for ever. Sending the "|" by itself is the same as pressing RETURN.

WA stands for "wait" and tells FLASH to wait for the BBS to send the string that follows WA. When this string is received, FLASH then goes on to the next command. As you can see, the WA command is used to control FLASH and send responses at the proper time. The whole concept of DO files would be pretty much useless if there wasn't a WA command.

PA stands for pause. This command is used when some kind of time lag needs to be built in to the communications process. In this case, the ACCESS BBS won't always catch the following RETURN if I don't precede it with a PA command. I guess FLASH is just too fast!

^C stands for "Control-C" and is not a FLASH command (notice the lack of the ">" sign). Control-C is a command that tells the BBS to skip sending the current file and move on. In this case, the ^C tell the BBS to skip the intro screen.

II, AS M, XM S, and DP G: are all FLASH commands that set different parameters of FLASH. For the ACCESS BBS, the most important is XM S. This will make uploading to ACCESS a successful experience. If you leave the parameter setting alone (i.e., last sector padding to ^Z), ACCESS (and SELECT) will truncate the file when saving it. Not good for the person who d/l's your file!





# Thinking About Computers

by Bob Haynes

## IT'S A BOARD! IT'S A BRAIN! IT'S...

By this time next year, the following concepts will be commonplace stuff. You will be able to explain them to new computer owners clearly and casually. Obviously they are not something most computerists are willing to accept right now, much like the case of the medieval monks who had trouble believing that the earth was spherical and moved about a smallish star near the periphery of a galaxy.

Admittedly, I botched the attempt to explain the situation at the August meeting. But this is important. It is bigger than windows. Bigger than the mouse. Bigger than desktop publishing. So here we go again. Hypercard. After much soulsearching, Apple has decided to GIVE this package away to new Macintosh owners. Existing owners can buy it for forty-nine cash dollars. IBM will soon have a similar package developed by a third-party company, Owl Technologies. The tentative name: William Tell.

Point number one: The two major players in microcomputing believe that this package is important enough to squabble about.

Point number two: Note the avoidance of the word software. The last part of the name Hypercard suggests a board rather than a disk. Point number three: The concepts are neither new nor, taken individually, complex. The impact of these packages, however, is going to be both complex and staggering.

If you are not convinced about the potential impact of Hypercard, call up a couple of Apple-only software companies. Some of them are already foaming at the mouth about this move by Apple. Would they be making so much fuss over something with low impact potential? Not likely.

Point number four: There is some new vocabulary coming. Buzzwords if you prefer.

-Module/modular: like procedures in LOGO/LISP, or words in FORTH. Each module will probably have a single function. A concerted effort will be made to standardize modules within languages and across computer companies.

-Shell/matrix/framework: the structure in which modules will be placed to build programs.

-Customize/customization: with reference to the capability of home users to tailor software to fit their own needs. Speaking personally, if I were able to customize a word processor from a smorgasbord of choices, I'd kiss off about 75% to 80% of the options found on the full-featured word processors. Goodbye, superscript and subscript. So long, right justification. Farewell, block moves.

-Library: a collection of modules, most likely grouped by some classification system (sound effects, shapes, CD-I handlers, etc.)

Point number five: Software houses will be shifting gears somewhat. The new emphasis will be on publishing libraries of modules. With the development of what I have dubbed snap-together programming, on the other hand, large scale games (three megabytes and more) will become feasible.

Point number six: Small modules will come from everywhere. Authorship credit will be quickly lost. Since most material will become de facto public domain in short order nobody will be able to copyright modules as intellectual property. The issue of piracy will diminish in importance.

Point number seven: Atari needs to bring a version of this technology to market post haste. Preferably before the Christmas season.

We are only scratching the surface of the subject here. Much remains to think and talk about. Much more, it is hoped, will be done.



# The Polyglot Programmer

by Michael Stomp

## WHERE AM I? (2)

We were discussing methods to make ML routines relocatable so they can be stored in Basic string variables. The method was to eliminate all references to absolute addresses within the routine itself. We saw that we could substitute forced branches for JMPs, and use Page Zero pointers with "indirect indexed" addressing in place of absolute addresses. This latter method works for ADC, AND, CMP, EOR, LDA, ORA, SBC, and STA. (The example last time used ORA specifically.)

This time I want to look at JSR; this instruction uses absolute addressing only, so we have to find another method. To wit: a JMP (jump) table. Suppose, in your routine, you have some subroutines that you call from various places -- say, subroutines with labels like SUB1 and so forth. If you call them by JSR SUB1 your code will not be relocatable.

To remedy this, we create a table in memory with three bytes for each subroutine. The first byte is the op code for JMP and the next two contain the address of the subroutine. Now, when you want to call a subroutine, you call it through its entry in the JMP table. That is: use JSR SUB1V in place of JSR SUB1, etc. We get the addresses of the subroutines by the same method used last time to get the address of the look-up table. Remember that Basic puts the address of the USR routine it is calling into the two bytes at FR0 (212,213). In my example, I've put the JMP table right after them, locations 214 on. These bytes, from 214 through 235 are the floating point "registers", and are usually available, since USR routines seldom do floating point arithmetic. However, Basic will certainly use these locations, so you will have to rebuild the JMP table on each entry to the USR.

(If you have some spare memory elsewhere that you can use on a permanent basis, you could write the USR so it sets up the table only once, and then checks, on later entries, to see if the table is there. This would cut down the overhead a little.)

Let's look at an example:

```
FR0      = 212
          *= 214 ; (See text)
SUB1V    *= *+3 ; JMP table
SUB2V    *= *+3 ; continue as needed
          .
          .
          .
          *= $4000 ; Relocatable!
START    LDA #$4C ; JMP op-code
          STA SUB1V ; into table
          STA SUB2V
          .
          .
          .
          LDY FR0 ; save start
          LDX FR0+1 ; address
          ;
          ;
          TYA ; repeat this
          CLC ; calculation
          ADC #SUB1-START&255
          STA SUB1V+1
          TXA ; for each
          ADC #SUB1-START/256
          STA SUB1V+2 ; subroutine
          .
          .
          .
          etc.
```

After setting up the JMP table in this way, continue with the old, non-relocatable routine as it was, remembering, however, to change all the JSR addresses to JMP table addresses. Of course, you will also use the methods discussed in Part (1) to take care of other absolute addresses that might occur.

(By the way; I store the contents of FR0 and FR0+1 in the X and Y registers temporarily, since I will need them again for each subroutine address I process, and they are handy there. It saves a few bytes and a few clock cycles; I hope it didn't confuse anyone.)



FRED and ME  
By D.B.

I'm an 8-bit man myself  
And I'm as proud as I can be.  
You won't find mine on a shelf.  
It's still an 8-bit world for me!

Oh, those 16-bits are nice;  
I'm sure we'll all agree.  
And it's not the higher price  
That keeps the world 8-bit for me.

I just can't put away  
That XL or XE  
Or old 800, Fred  
Who's been such a friend to me.

I learned the language that he used,  
Learned his text and graphics mode;  
I'm sure he laughed sometimes at me  
While learning all his Basic code.

But he stayed a friend to me,  
Tolerated fumbling fingers;  
Though sometimes we'd disagree  
Those fond memories still do linger.

I must admit that I'm impressed  
By the world of the ST,  
All that speed and fancy dress  
And what it does so graphically

But, make it like an IBM?  
I must say I can't condone it.  
The chances are, I think, real slim  
That they'll take old Fred and clone it.

So, I'll talk to old Fred daily  
And say Fred - how 'bout this?  
He may take a while to answer  
But it's like a lovers kiss

So much sweeter if they linger,  
So much better if they're slow,  
So I'll keep giving Fred the finger  
But I'll never let him go.

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